

PATENT
Attorney Docket Nos. VM7010755001
(Formerly 267/032)
Varian No. 98-33-01 US

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AMENDMENTS TO THE CLAIMS

Please cancel claims 49 and 57, amend claims 30, 53, 58, 59, 61, and 64, and insert new claims 65-70, as follows. A complete listing of the claims is provided below.

1-28. (Canceled)

29. (Previously Presented) The system of claim 53 in which one of the two or more reflective elements comprises a hemispherical shape.

30. (Currently Amended) A marker system for use in a patient treatment system comprising:
a marker block having a surface area;
a first reference location on the surface area;
a second reference location on the surface area, and spaced apart from the first reference location; and

the first reference location and the second reference location positioned on the surface area such that both reference locations are simultaneously detectable by an optical imaging apparatus.

31. (Previously Presented) The system of claim 30 in which the first and second reference locations comprise retro-reflective material.

32. (Previously Presented) The system of claim 48, wherein said structure is sized to fit a patient body location.

33. (Canceled)

34. (Previously Presented) The system of claim 53 in which said two or more reflective elements are retro-reflective elements.

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35. (Previously Presented) The system of claim 53 in which said marker block is shaped to fit a specific body location.

36-37. (Canceled)

38. (Previously Presented) The system of claim 54 in which absolute coordinate of said one or more optical imaging apparatus is known.

39. (Previously Presented) The system of claim 54 in which viewing orientation of said one or more optical imaging apparatus is known.

40. (Previously Presented) The system of claim 54 in which absolute coordinate of said one or more optical imaging apparatus is known.

41. (Previously Presented) The system of claim 54 in which said one or more optical imaging apparatus comprises CCD cameras.

42. (Previously Presented) The system of claim 53 further comprising one or more optical imaging apparatus and a computing device to receive output information from said one or more optical imaging apparatus, the computing device having a processor configured to determine the position and orientation of said marker block based on the information.

43. (Previously Presented) The system of claim 53 further comprising a video display device to display a video image of a patient.

44. (Previously Presented) The system of claim 43 in which said video image comprises real-time images of said marker block.

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45. (Previously Presented) The system of claim 43 in which said video image comprises real-time images of said patient.

46-51. (Canceled)

52. (Previously Presented) The system of claim 30, further comprising said optical imaging apparatus.

53. (Currently Amended) A marker system, comprising:
a marker block having a surface;
two or more reflective elements located on said surface, said two or more reflective elements having known positioning relative to each other, wherein one of said two or more reflective elements is spaced apart from another of said two or more reflective elements; and
said marker block positioned such that at least two of said two or more reflective elements are viewable by one or more optical imaging apparatus.

54. (Previously Presented) The system of claim 53, further comprising said one or more optical imaging apparatus.

55. (Previously Presented) The marker system of claim 30, wherein the marker block is a non-surgical instrument.

56. (Previously Presented) The marker system of claim 53, wherein the marker block is a non-surgical instrument.

57. (Canceled)

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58. (Currently Amended) The method of claim 57-65, wherein the first portion is at a first location on the person's chest, and the second portion is at a second location on the person's chest.

59. (Currently Amended) The method of claim 57-65, further comprising coupling a third marker to a third portion of the person.

60. (Previously Presented) The method of claim 59, wherein the first marker remains substantially stationary relative to the third marker during the procedure.

61. (Currently Amended) The method of claim 57-65, further comprising performing the procedure.

62. (Previously Presented) The method of claim 61, wherein the procedure comprises a treatment session.

63. (Previously Presented) The method of claim 61, wherein the procedure is performed before a treatment session.

64. (Currently Amended) The method of claim 57-65, wherein the steps of coupling are performed using a marker block to which the first and the second markers are secured.

65. (New) A method of using a marker system during a procedure, comprising:
coupling a first reflective element to a first portion of a person; and
coupling a second reflective element to a second portion of the person, wherein the first reflective element remains substantially stationary relative to the second reflective element during the procedure.

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66. (New) The method of claim 65, further comprising detecting the reflective elements using an optical imaging apparatus.

67. (New) The method of claim 30, wherein the first reference location comprises a first marker, and the second reference location comprises a second marker.

68. (New) The method of claim 53, wherein the two or more reflective elements comprise two or more markers.

69. (New) The marker system of claim 30, wherein the marker block is adapted for placement on top of a patient.

70. (New) The marker system of claim 53, wherein the marker block is adapted for placement on top of a patient.

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